

CLAIMS

1. A method of speed limitation with distance control
5 for a motor vehicle equipped with telemetry means intended to estimate the distance and the speed of the vehicles traveling in the same traffic lane as the vehicle, and means of slaving of the operation of the engine speed-wise and distance-wise, characterized in
10 that it carries out the following steps:
- a) activation of the method;
 - b) choice of a speed preset;
 - c) verification of the absence of a slower target vehicle in the same traffic lane, and if so:
 - 15 -e) limitation of the engine torque by action of the driver on the acceleration pedal as long as the vehicle speed is below the preset speed and by automatic control when the preset speed is reached or exceeded, with possibility of deactivation of
20 the method;
 - d) verification of the presence of a slower target vehicle in front of the equipped vehicle in the same traffic lane, and if so:
 - f) automatic reduction of the speed and
25 maintaining of a constant following time between the two vehicles, which can be adjusted by the driver;
 - g) reduction, permitted to the driver, of the speed determined by the method, by lifting of the
30 foot on the accelerator pedal or pressing the brake without deactivating the method of speed limitation;
 - h) verification of the speed of the target vehicle, and in case of increase beyond the preset
35 speed, possibility of acceleration for the driver of the equipped vehicle up to the speed preset or distance preset if the target vehicle is caught up with again.

2. A system for implementing said method of limitation of speed with distance control for a motor vehicle, comprising first telemetry means intended to
5 estimate the distance and the speed of the vehicles traveling in the same traffic lane as the equipped vehicle, and second means of slaving of the operation of the engine speed-wise and distance-wise, receiving as input a speed preset and a following time preset and
10 delivering a vehicle acceleration and braking command, characterized in that it comprises moreover:

- third means (3) of reconstruction of the braking request (P_F) of the driver, intended to deliver a signal (S_F) homogeneous with the
15 braking command (C_F) delivered by the aforesaid slaving means (2);
- fourth means (4) of reconstruction of the acceleration request (P_A) of the driver, intended to deliver a signal (S_A) homogeneous
20 with the acceleration command (C_A) delivered by the aforesaid slaving means (2);
- fifth means (5) of arbitration between the braking signal (S_F) requested by the driver and the braking command (C_F) by calculation of the
25 maximum value (F_M) between these two braking values;
- sixth means (6) of arbitration between the acceleration signal (S_A) requested by the driver and the acceleration command (C_A) by calculation
30 of the minimum value (A_m) between these two acceleration values;
- seventh means (7) of arbitration between the control of the braking (F_M) and that of the acceleration (A_m) by priority choice of braking
35 over acceleration, delivering control signals to the braking member of the vehicle and to the engine.

3. The system as claimed in claim 2, characterized in that, in the case where it has in addition a device for resumption of control by the driver, by mechanical hard point at the extremity of the travel of the accelerator
5 pedal in particular, and should this device be actuated by the driver, the seventh means (7) of arbitration give priority to the braking or acceleration requests of the driver over the requests of the speed limitation system.